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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,146	10/27/2001	Mingte Chen	SBL0004P1US	7132
60/975 7590 08/16/2010 CAMPBELL STEPHENSON LLP 11401 CENTURY OAKS TERRACE BLDG. H, SUITE 250 AUSTIN, TX 78758				
			EXAMINER JOO, JOSHUA	
			ART UNIT 2454	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/033,146

**Applicant(s)**

CHEN ET AL.

**Examiner**

JOSHUA JOO

**Art Unit**

2454

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 June 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 6-23, 25-34, 36-45, 47-55, 58 and 60-69 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 6-23, 25-34, 36-45, 47-55, 58, 60-69 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 October 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-940)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 06/18/2010
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

***Detailed Action***

This Office action is in response to Applicant's communication filed on June 18, 2010.

Claims 1, 6-23, 25-34, 36-45, 47-55, 58, 60-68, and 69 are pending for examination.

**Continued Examination Under 37 CFR 1.114**

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(c), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(c) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 18, 2010 has been entered.

**Information Disclosure Statement**

The information disclosure statement (IDS) submitted June 18, 2010 is being considered by the Examiner. It is noted that Documents 5,309,563, 5,974,474, and 6,657,990 are considered. However, for 5,309,563 and 6,657,990, the corresponding listed publication dates are incorrect, and for 5,974,474, the name of patentee is incorrect.

**Response to Arguments**

Applicant's arguments with respect to claims 1, 6-23, 25-34, 36-45, 47-55, 58, 60-68, and 69 have been considered but are moot in view of the new ground(s) of rejection. Applicant also argued that:

(1) Fisher does not disclose a wait request that specifies a target process of a plurality of processes.

In response, Examiner respectfully disagrees that Fisher does not teach the limitation. Fisher teaches of a plurality of objects configured to generate asynchronous messages and sending a notification registration request that specifies a target object (col. 3, lines 40-48; col. 14, lines 5-15, 25-42).

### **Claim Objections**

Claims 58, 60-67 objected to because of the following informalities:

- a) Regarding claim 58, the claim appears to be non-compliant as the claim comprises new features that are not underlined and the status of the claim is listed as "Previously Presented".

Appropriate correction is required.

### **Claim Rejections - 35 USC § 101**

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 23, 25-33, 58, 60-67 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding claims 23 and 33, Applicant is seeking to patent a computer program product comprising a computer-readable medium. The instant specifications describes that the present invention is described in context of software applications and that the invention may be implemented by software. The specification also describes that the program product could be distributed by media such as transmission media (Page 21, lines 15-30). The computer program product comprising the computer readable medium could be considered as transitory media, which have been held to be non-statutory.

Regarding claim 58, Applicant is seeking to patent a system comprising modules and a computer readable storage medium storing the modules. The computer readable storage medium could be considered as transitory media, which has been held to be non-statutory. The claimed system could be

considered a transitory media comprising software as the system lacks functional hardware.

It is suggested that Applicant amend each of the claims to recite "non-transitory computer readable storage medium" to overcome the rejection under 35 U.S.C. § 101. The suggested amendment will not be considered as "new matter".

#### **Claim Rejections - 35 USC § 112**

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 6-15, 19-21, 23, 25-34, 36-45, 47-55, 58, 60-69 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) Regarding claims 1, 19-21, 23, 33-34, 44-45, and 55, the term "capable" renders the claim indefinite. The term suggests an action is possible but does not actually require the subsequent action to be performed. Claim scope is not limited by claim language that suggests or makes optional but does not require steps to be performed, or by claim language that does not limit a claim to a particular structure. See MPEP 2111.04.

b) Regarding claim 58, the claim comprises a new feature of "the web browser is not blocked from receiving information from the web server while the web browser waits for the asynchronous message". The new feature is not present in a previously filed amendment but the feature is not underlined nor is the status of the claim correct. It is unclear whether the feature is required for the claim.

#### **Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2454

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 6, 8-13, 19-23, 25-30, 33-34, 36-41, 44-45, 47-52, 55, 58, 60-65, and 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pell, US Patent #7,392,540 (Pell hereinafter), in view of Eftis et al. US Patent No. 7,171,473 (Eftis hereinafter) and Fisher et al. US Patent #6,212,511 (Fisher hereinafter).

As per claim 1, Pell teaches substantially the invention as claimed including a method for communicating comprising:

controlling a user interface presented by a web browser comprising:

establishing a connection between the web browser and a web server (col. 5, lines 9-10. Browser. col. 6, lines 18-21, 26-34. Connect to server.);

causing the web browser to provide a wait request to the web server wherein, the web browser waits for an asynchronous message; the wait request is associated with the browser, and the wait request enables the web server to push the asynchronous message to the web browser (col. 8, lines 36-46. Request from agent, "log in" procedure. col. 5, lines 40-52; col. 7, lines 26-30. Identify available agent and initiate link with agent.);

causing the web server to push the asynchronous message to the web browser in response to an incoming event, wherein the web browser presents a user interface change in response to the asynchronous message (col. 7, lines 17-19. Receive request. col. 6, lines 47-50. Establish link between browsers. col. 9, lines 53-55. Send a support request to selected agent.);

identifying a source of the asynchronous message, associating the wait request with the source, wherein the associating identifies the web browser as a recipient of the asynchronous message (col. 5, lines 35-37, col. 8, lines 50-54, 63-67. Match particular customer to a particular agent.).

Pell does not specifically teach that the connection is a persistent connection and that the browser is capable of concurrently performing other tasks. Pell does not specifically teach the wait request specifies a target process of a plurality of processes, the processes are configured to generate asynchronous messages, the source of the asynchronous message is the target process.

Eftis teaches of establishing a persistent connection between a web browser and a web server, wherein the web browser waits for an asynchronous message and is capable of concurrently performing other tasks (col. 4, lines 6-11, 33-43; col. 9, lines 19-31; col. 14, lines 58-67. Maintain connection in a non-blocking manner and receive messages.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to establish a persistent connection between the web browser and a web server wherein the web browser waits for an asynchronous message and is capable of concurrently performing other tasks. The motivation for the suggested combination is that Eftis' teachings would improve Pell's teachings by facilitating multiple forms of communication with a user and enabling the web browser to receive update messages.

Fisher teaches of a request that specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process (col. 4, lines 43-48; col. 5, lines 18-22, 46-50; col. 14, lines 25-36; col. 15, lines 1-11, 21-27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the wait request to specify a target process of a plurality of processes, and for the processes to be configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process. The motivation for the suggested combination is that Fisher's teachings would improve the suggested system by enabling users to register for event notifications from specified sources while limiting the event notifications to authorized users.

As per claim 19, Pell teaches substantially the invention as claimed including a method for communication, comprising:

establishing a first connection between a web browser and a web server (col. 8, lines 36-46. An interface receives request from agent. "log in" procedure.);

establishing a second connection between the web server and a business process server (col. 5, lines 46-50. Initiate via path to permit interaction.);

controlling a user interface presented by the web browser comprising:

registering the web browser with the business process server (col. 8, lines 36-46. Request from agent. "log in" procedure with rendezvous service.);

providing the web server with an asynchronous message to push to the web browser, the providing being performed by the business process server and the providing being performed in response to an incoming event, wherein the web browser waits for the asynchronous and the incoming event comprises a request to establish communication with a user (col. 7, lines 17-19. Receive request for support or services. col. 6, lines 47-50. Establish link between browsers. col. 9, lines 53-55. Send a support request to selected agent.); and

causing the web server to push the asynchronous message to the browser; wherein the web browser performs a user interface change in response to the asynchronous message (col. 6, lines 47-50. Establish link between browsers. col. 5, lines 40-52. Initiate path with browser and permit interaction.); and

causing the web browser to provide a wait request to the web server, wherein the wait request is associated with the web browser, and the wait request enables the web server to push the asynchronous message to the web browser (col. 8, lines 36-46. Request from agent. "log in" procedure. col. 5, lines 40-52; col. 7, lines 26-30. Identify available agent.);



identifying a source of the asynchronous message; and associating the wait request with the source, wherein the associating identifies web browser as a recipient of the asynchronous message (col. 5, lines 35-37, col. 8, lines 50-54, 63-67. Match particular customer to a particular agent. ).

Pell does not specifically teach the web browser waits and is capable of concurrently performing other tasks. Pell does not specifically teach that the wait request specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process.

Eftis teaches of establishing a persistent connection between a web browser and a web server, wherein the web browser waits for an asynchronous message and is capable of concurrently performing other tasks (col. 4, lines 6-11, 33-43; col. 9, lines 19-31; col. 14, lines 58-67. Maintain connection in a non-blocking manner and receive messages.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the web browser to wait for an asynchronous message and be capable of concurrently performing other tasks. The motivation for the suggested combination is that Eftis' teachings would improve Pell's teachings by facilitating multiple forms of communication with a user and enabling the web browser to receive update messages.

Fisher teaches of a request that specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process (col. 4, lines 43-48; col. 5, lines 18-22, 46-50; col. 14, lines 25-36; col. 15, lines 1-11, 21-27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the wait request to specify a target process of a plurality of processes, and for the processes to be configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process. The motivation for the suggested combination is that

Fisher's teachings would improve the suggested system by enabling users to register for event notifications from specified sources while limiting the event notifications to authorized users.

As per claim 20, Pell teaches substantially the invention as claimed including a method for communicating comprising:

controlling a user interface presented by a web browser comprising:

registering the web browser as available to receive an asynchronous message, wherein the web browser waits for the asynchronous message and the web browser is not blocked waiting for the asynchronous message (col. 5, lines 40-45. Request to identify agent as available. col. 8, lines 36-46. Request from agent. "log in" procedure.); and

causing a web server to push an asynchronous message to the web browser in response to an incoming event, wherein the incoming event comprises a request to establish communication with a user (col. 5, lines 9-10. Agent browser. col. 7, lines 17-19. Receive request for support or services. col. 6, lines 47-50. Establish link between browsers. col. 9, lines 53-55. Send a support request to selected agent.)

the web browser presents a user interface change in response to the asynchronous message (col. 5, lines 40-52. Initiate path with browser and permit interaction.), and

the incoming event is received by a communication server (col. 5, lines 21-26. Proxy receives request. col. 5, lines 32-35. Rendezvous service also receives request);

causing the web browser to provide a wait request to the web server wherein, the wait request is associated with the web browser, and the wait request enables the web server to push the asynchronous message to the web browser (col. 8, lines 36-46. Request from agent. "log in" procedure. col. 5, lines 40-52; col. 7, lines 26-30. Identify available agent.);

identifying a source of the asynchronous message; and associating the wait request with the source wherein the associating identifies web browser as a recipient of the asynchronous message (col. 5, lines 35-37, col. 8, lines 50-54, 63-67. Match particular customer to a particular agent.).

Pell does not specifically teach the web browser waits and is capable of concurrently performing other tasks. Pell does not specifically teach that the wait request specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process.

Eftis teaches of establishing a persistent connection between a web browser and a web server, wherein the web browser waits for an asynchronous message and is capable of concurrently performing other tasks (col. 4, lines 6-11, 33-43; col. 9, lines 19-31; col. 14, lines 58-67. Maintain connection in a non-blocking manner and receive messages.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the web browser to wait for an asynchronous message and be capable of concurrently performing other tasks. The motivation for the suggested combination is that Eftis' teachings would improve Pell's teachings by facilitating multiple forms of communication with a user and enabling the web browser to receive update messages.

Fisher teaches of a request that specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process (col. 4, lines 43-48; col. 5, lines 18-22, 46-50; col. 14, lines 25-36; col. 15, lines 1-11, 21-27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the wait request to specify a target process of a plurality of processes, and for the processes to be configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process. The motivation for the suggested combination is that

Fisher's teachings would improve the suggested system by enabling users to register for event notifications from specified sources while limiting the event notifications to authorized users.

As per claim 21, Pell teaches substantially the invention as claimed including a method for communicating, comprising:

controlling a user interface presented by a web browser comprising:

causing the web browser to provide a wait request to a web server, the wait request being associated with the web browser, and the wait request enables the web server to push the asynchronous message to the web browser (col. 8, lines 36-46. Request from agent. "log in" procedure. col. 5, lines 40-52; col. 7, lines 26-30. Identify available agent.);

identifying a source of an asynchronous message; associating the wait request with the source, wherein the associating identifies web browser as a recipient of the asynchronous message (col. 5, lines 35-37, col. 8, lines 50-54, 63-67. Match particular customer to a particular agent. col. 9, lines 53-55. Send a support request to selected agent.).

pushing the asynchronous message to the web browser in response to an incoming event, wherein the web browser waits for the asynchronous message; the incoming event comprises a request to establish communication with a user (col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent.),

the browser presents a user interface change in response to the asynchronous message (col. 5, lines 40-52. Initiate path with browser and permit interaction.); and

the incoming event is received by a communication server (col. 5, lines 21-26. Proxy receives request. col. 5, lines 32-35. Rendezvous service also receives request.);

identifying a source of an asynchronous message; associating the wait request with the source, wherein the associating identifies web browser as a recipient of the asynchronous message (col. 5, lines

35-37, col. 8, lines 50-54, 63-67. Match particular customer to a particular agent. col. 9, lines 53-55.

Send a support request to selected agent.).

Pell does not specifically teach that the web browser waits and is capable of concurrently performing other tasks. Pell does not specifically teach that the wait request specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process.

Eftis teaches of establishing a persistent connection between a web browser and a web server, wherein the web browser waits for an asynchronous message and is capable of concurrently performing other tasks (col. 4, lines 6-11, 33-43; col. 9, lines 19-31; col. 14, lines 58-67. Maintain connection in a non-blocking manner and receive messages.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the web browser to wait for an asynchronous message and be capable of concurrently performing other tasks. The motivation for the suggested combination is that Eftis' teachings would improve Pell's teachings by facilitating multiple forms of communication with a user and enabling the web browser to receive update messages.

Fisher teaches of a request that specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process (col. 4, lines 43-48; col. 5, lines 18-22, 46-50; col. 14, lines 25-36; col. 15, lines 1-11, 21-27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the wait request to specify a target process of a plurality of processes, and for the processes to be configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process. The motivation for the suggested combination is that

Fisher's teachings would improve the suggested system by enabling users to register for event notifications from specified sources while limiting the event notifications to authorized users.

As per claim 22, Pell teaches substantially the invention as claimed including a method for communicating, comprising:

controlling a user interface presented by a web browser comprising:

causing the web browser to provide a wait request to a web server, wherein the wait request is associated with the web browser and a target from which an asynchronous message originates, and the wait request enables the web server to push the asynchronous message to the web browser (col. 8, lines 36-46. Request from agent. "log in" procedure. col. 5, lines 40-52; col. 7, lines 26-30. Identify available agent. col. 5, lines 35-37, col. 8, lines 50-54, 63-67. Match particular customer to a particular agent.);

generating the asynchronous message, the asynchronous message identifying the web browser as a recipient of the asynchronous message, the generating being performed by the target (col. 9, lines 53-55. Send a support request to selected agent.);

providing the asynchronous message to the web server (col. 5, lines 46-50. Initiate via path to permit interaction); and

causing the web server to push the asynchronous message to the web browser in response to an incoming event, wherein the incoming event comprises a request to establish communication with a user (col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent.),

the web browser presents a user interface change in response to the asynchronous message; and the incoming event is received by a communication server (col. 5, lines 40-52. Initiate path with browser and permit interaction.).

Pell does not specifically teach that the web browser is not blocked from receiving information from the web server while the web browser waits for the asynchronous message. Pell does not specifically teach that the wait request specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process.

Eftis teaches of establishing a persistent connection between a web browser and a web server, wherein the web browser is not blocked from receiving information from the web server while the web browser waits for the asynchronous message (col. 4, lines 6-11, 33-43; col. 9, lines 19-31; col. 14, lines 58-67. Maintain connection in a non-blocking manner and receive messages.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the web browser to not be blocked from receiving information from the web server while the web browser waits for the asynchronous message. The motivation for the suggested combination is that Eftis' teachings would improve Pell's teachings by facilitating multiple forms of communication with a user and enabling the web browser to receive update messages.

Fisher teaches of a request that specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process (col. 4, lines 43-48; col. 5, lines 18-22, 46-50; col. 14, lines 25-36; col. 15, lines 1-11, 21-27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the wait request to specify a target process of a plurality of processes, and for the processes to be configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process. The motivation for the suggested combination is that Fisher's teachings would improve the suggested system by enabling users to register for event notifications from specified sources while limiting the event notifications to authorized users.

As per claim 23, Pell teaches substantially the invention as claimed including a computer program product comprising:

controlling instructions to control a user interface presented by a web browser comprising:

pushing instructions to cause a web server to push an asynchronous message to the web browser in response to an incoming event, wherein the web browser waits for the asynchronous message; the incoming event comprises a request to establish communication with a user (col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent.);

the web browser presents a user interface change in response to the asynchronous message (col. 5, lines 40-52. Initiate path with browser and permit interaction.), and

the incoming event is received by a communication server (col. 5, lines 21-26. Proxy receives request. col. 5, lines 32-35. Rendezvous service also receives request.);

providing instructions to cause the web browser to provide a wait request to the web server, the wait request being associated with the web browser and the wait request enable the web server to push the asynchronous message to the web browser (col. 8, lines 36-46. Request from agent. "log in" procedure. col. 5, lines 40-52; col. 7, lines 26-30. Identify available agent.);

identifying instructions to identify a source of the asynchronous message; and associating instructions to associate the wait request with the source, wherein the associating identifies web browser as a recipient of the asynchronous message (col. 5, lines 35-37, col. 8, lines 50-54, 63-67. Match particular customer to a particular agent. col. 9, lines 53-55. Send a support request to selected agent.); and

a computer-readable medium for storing the controlling instructions, the pushing instructions, the providing instructions, the identifying instructions, and the associating instructions (fig. 8; col. 4, lines 55-67; col. 5, lines 4-15. Physical server system comprising data for initiating communications.).



Pell does not specifically teach the web browser waits and is capable of concurrently performing other tasks. Pell does not specifically teach that the wait request specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process.

Eftis teaches of establishing a persistent connection between a web browser and a web server, wherein the web browser waits for an asynchronous message and is capable of concurrently performing other tasks (col. 4, lines 6-11, 33-43; col. 9, lines 19-31; col. 14, lines 58-67. Maintain connection in a non-blocking manner and receive messages.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the web browser to wait for an asynchronous message and be capable of concurrently performing other tasks. The motivation for the suggested combination is that Eftis' teachings would improve Pell's teachings by facilitating multiple forms of communication with a user and enabling the web browser to receive update messages.

Fisher teaches of a request that specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process (col. 4, lines 43-48; col. 5, lines 18-22, 46-50; col. 14, lines 25-36; col. 15, lines 1-11, 21-27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the wait request to specify a target process of a plurality of processes, and for the processes to be configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process. The motivation for the suggested combination is that Fisher's teachings would improve the suggested system by enabling users to register for event notifications from specified sources while limiting the event notifications to authorized users.

As per claim 33, Pell teaches substantially the invention as claimed including a computer program product comprising:

controlling a user interface presented by a web browser comprising:

registering the web browser as available to receive an asynchronous message, wherein the web browser waits for the asynchronous message and the web browser is not blocked waiting for the asynchronous message (col. 5, lines 40-45. Request to identify agent as available. col. 8, lines 36-46. Request from agent. “log in” procedure.); and

causing a web server to push an asynchronous message to the web browser in response to an incoming event, wherein the incoming event comprises a request to establish communication with a user (col. 5, lines 9-10. Agent browser. col. 7, lines 17-19. Receive request for support or services. col. 6, lines 47-50. Establish link between browsers. col. 9, lines 53-55. Send a support request to selected agent.)

the web browser presents a user interface change in response to the asynchronous message (col. 5, lines 40-52. Initiate path with browser and permit interaction.), and

the incoming event is received by a communication server (col. 5, lines 21-26. Proxy receives request. col. 5, lines 32-35. Rendezvous service also receives request.);

causing the web browser to provide a wait request to the web server wherein, the wait request is associated with the web browser, and the wait request enables the web server to push the asynchronous message to the web browser (col. 8, lines 36-46. Request from agent. “log in” procedure. col. 5, lines 40-52; col. 7, lines 26-30. Identify available agent.);

identifying a source of the asynchronous message; associating the wait request with the source wherein the associating identifies web browser as a recipient of the asynchronous message (col. 5, lines 35-37, col. 8, lines 50-54, 63-67. Match particular customer to a particular agent.); and

a computer-readable medium for storing the controlling instructions, the registering instructions, the pushing instructions, the providing instructions, the identifying instructions, and the associating instructions. (fig. 8; col. 4, lines 55-67; col. 5, lines 4-15. Physical server system comprising data for initiating communications.).

Pell does not specifically teach the web browser waits and is capable of concurrently performing other tasks. Pell does not specifically teach that the wait request specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process.

Eftis teaches of establishing a persistent connection between a web browser and a web server, wherein the web browser waits for an asynchronous message and is capable of concurrently performing other tasks (col. 4, lines 6-11, 33-43; col. 9, lines 19-31; col. 14, lines 58-67. Maintain connection in a non-blocking manner and receive messages.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the web browser to wait for the asynchronous message and be capable of concurrently performing other tasks. The motivation for the suggested combination is that Eftis' teachings would improve Pell's teachings by facilitating multiple forms of communication with a user and enabling the web browser to receive update messages.

Fisher teaches of a request that specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process (col. 4, lines 43-48; col. 5, lines 18-22, 46-50; col. 14, lines 25-36; col. 15, lines 1-11, 21-27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the wait request to specify a target process of a plurality of processes, and for the processes to be configured to generate asynchronous messages, wherein the source of the

asynchronous message is the target process. The motivation for the suggested combination is that Fisher's teachings would improve the suggested system by enabling users to register for event notifications from specified sources while limiting the event notifications to authorized users.

As per claim 34, Pell teaches substantially the invention as claimed including a computer system comprising:

a processor; a memory, the memory storing instructions for executing on the processor, the instructions comprising (fig. 8; col. 4, lines 55-67; col. 5, lines 4-15. Physical server system comprising data for initiating communications.):

controlling instructions to control a user interface presented by a web browser comprising:

pushing instructions to cause a web server to push an asynchronous message to the web browser in response to an incoming event, wherein the incoming event comprises a request to establish communication with a user, the web browser waits for the asynchronous message; the web browser presents a user interface change in response to the asynchronous message (col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent.), and

the incoming event is received by a communication server (col. 5, lines 21-26. Proxy receives request. col. 5, lines 32-35. Rendezvous service also receives request.);

providing instructions to cause the web browser to provide a wait request to the web server, the wait request being associated with the web browser, and the wait request enables the web server to push the asynchronous message to the web browser (col. 8, lines 36-46. Request from agent. "log in" procedure. col. 5, lines 40-52; col. 7, lines 26-30. Identify available agent.);

identify instructions to identify a source of the asynchronous message; and associating instructions to associate the wait request with the source, wherein the associating identifies web browser

as a recipient of the asynchronous message (col. 5, lines 35-37, col. 8, lines 50-54, 63-67. Match particular customer to a particular agent. col. 9, lines 53-55. Send a support request to selected agent.).

Pell does not specifically teach the web browser waits and is capable of concurrently performing other tasks. Pell does not specifically teach that the wait request specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process.

Eftis teaches of establishing a persistent connection between a web browser and a web server, wherein the web browser waits for an asynchronous message and is capable of concurrently performing other tasks (col. 4, lines 6-11, 33-43; col. 9, lines 19-31; col. 14, lines 58-67. Maintain connection in a non-blocking manner and receive messages.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the web browser to wait for the asynchronous message and be capable of concurrently performing other tasks. The motivation for the suggested combination is that Eftis' teachings would improve Pell's teachings by facilitating multiple forms of communication with a user and enabling the web browser to receive update messages.

Fisher teaches of a request that specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process (col. 4, lines 43-48; col. 5, lines 18-22, 46-50; col. 14, lines 25-36; col. 15, lines 1-11, 21-27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the wait request to specify a target process of a plurality of processes, and for the processes to be configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process. The motivation for the suggested combination is that

Fisher's teachings would improve the suggested system by enabling users to register for event notifications from specified sources while limiting the event notifications to authorized users.

As per claim 44, Pell teaches substantially the invention as claimed including a computer system, comprising:

a processor; a memory, the memory storing instructions for executing on the processor, the instructions comprising (fig. 8; col. 4, lines 55-67; col. 5, lines 4-15. Physical server system comprising data for initiating communications.):

controlling instructions to control a user interface presented by a web browser comprising:

registering the web browser as available to receive an asynchronous message, wherein the web browser waits for the asynchronous message; the web browser is not blocked waiting for the asynchronous message (col. 5, lines 40-45. Request to identify agent as available. col. 8, lines 36-46. Request from agent. "log in" procedure.); and

causing a web server to push an asynchronous message to the web browser in response to an incoming event, wherein the incoming event comprises a request to establish communication with a user (col. 5, lines 9-10. Agent browser. col. 7, lines 17-19. Receive request for support or services. col. 6, lines 47-50. Establish link between browsers. col. 9, lines 53-55. Send a support request to selected agent.);

the web browser presents a user interface change in response to the asynchronous message (col. 5, lines 40-52. Initiate path with browser and permit interaction.), and

the incoming event is received by a communication server (col. 5, lines 21-26. Proxy receives request. col. 5, lines 32-35. Rendezvous service also receives request.);

causing the web browser to provide a wait request to the web server wherein, the wait request is associated with the web browser, and the wait request enables the web server to push the asynchronous

message to the web browser (col. 8, lines 36-46. Request from agent. "log in" procedure. col. 5, lines 40-52; col. 7, lines 26-30. Identify available agent.);

identifying a source of the asynchronous message; and associating the wait request with the source wherein the associating identifies web browser as a recipient of the asynchronous message (col. 5, lines 35-37, col. 8, lines 50-54, 63-67. Match particular customer to a particular agent.).

Pell does not specifically teach the web browser waits and is capable of concurrently performing other tasks. Pell does not specifically teach that the wait request specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process.

Eftis teaches of establishing a persistent connection between a web browser and a web server, wherein the web browser waits for an asynchronous message and is capable of concurrently performing other tasks (col. 4, lines 6-11, 33-43; col. 9, lines 19-31; col. 14, lines 58-67. Maintain connection in a non-blocking manner and receive messages.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the web browser to wait for the asynchronous message and be capable of concurrently performing other tasks. The motivation for the suggested combination is that Eftis' teachings would improve Pell's teachings by facilitating multiple forms of communication with a user and enabling the web browser to receive update messages.

Fisher teaches of a request that specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process (col. 4, lines 43-48; col. 5, lines 18-22, 46-50; col. 14, lines 25-36; col. 15, lines 1-11, 21-27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the wait request to specify a target process of a plurality of processes, and for

the processes to be configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process. The motivation for the suggested combination is that Fisher's teachings would improve the suggested system by enabling users to register for event notifications from specified sources while limiting the event notifications to authorized users.

As per claim 45, Pell teaches substantially the invention as claimed including a system for communicating comprising:

a client computer comprising: a web browser, wherein the web browser presents a user interface (col. 4, lines 29-35. Browser. col. 6, lines 48. Computer.);

a server computer coupled to the client computer (fig. 8; col. 4, lines 55-67; col. 5, lines 4-15. Physical server system comprising data for initiating communications.), wherein the server computer comprises

controlling means for controlling the user interface presented by the web browser,

pushing means for causing a web server to push an asynchronous message to the web browser in response to an incoming event, wherein the web browser waits for the asynchronous message; the incoming event comprises a request to establish communication with a user (col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent.),

the web browser presents a user interface change in response to the asynchronous message (col. 5, lines 40-52. Initiate path with browser and permit interaction. col. 9, lines 53-55. Receive request.), and

the incoming event is received by a communication server (col. 5, lines 21-26. Proxy receives request. col. 5, lines 32-35. Rendezvous service also receives request);

identifying means for identifying a source of the asynchronous message, and associating means for associating a wait request with the source, wherein the associating identifies web browser as a



recipient of the asynchronous message, and (col. 5, lines 35-37, col. 8, lines 50-54, 63-67. Match particular customer to a particular agent. col. 9, lines 53-55. Send a support request to selected agent.)

the client computer comprises providing means for causing the web browser to provide the wait request to the web server wherein, the wait request enables the web server to push the asynchronous message to the web browser (col. 8, lines 36-46. Request from agent. “log in” procedure. col. 5, lines 40-52; col. 7, lines 26-30. Identify available agent.).

Pell does not specifically teach the web browser waits and is capable of concurrently performing other tasks. Pell does not specifically teach that the wait request specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process.

Eftis teaches of establishing a persistent connection between a web browser and a web server, wherein the web browser waits for an asynchronous message and is capable of concurrently performing other tasks (col. 4, lines 6-11, 33-43; col. 9, lines 19-31; col. 14, lines 58-67. Maintain connection in a non-blocking manner and receive messages.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the web browser to wait for the asynchronous message and be capable of concurrently performing other tasks. The motivation for the suggested combination is that Eftis’ teachings would improve Pell’s teachings by facilitating multiple forms of communication with a user and enabling the web browser to receive update messages.

Fisher teaches of a request that specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process (col. 4, lines 43-48; col. 5, lines 18-22, 46-50; col. 14, lines 25-36; col. 15, lines 1-11, 21-27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the wait request to specify a target process of a plurality of processes, and for the processes to be configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process. The motivation for the suggested combination is that Fisher's teachings would improve the suggested system by enabling users to register for event notifications from specified sources while limiting the event notifications to authorized users.

As per claim 55, Pell teaches the invention as claimed including a system comprising:

a client computer comprising: a web browser (col. 4, lines 29-35. Browser. col. 6, lines 48. Computer.), wherein the web browser presents a user interface;  
a server computer coupled to the client computer (fig. 8; col. 4, lines 55-67; col. 5, lines 4-15. Physical server system comprising data for initiating communications.), wherein the server computer comprises:

controlling means for controlling a user interface presented by a web browser comprising:  
registering means for registering the web browser as available to receive an asynchronous message, wherein the web browser waits for the asynchronous message, and the web browser is not blocked waiting for the asynchronous message (col. 8, lines 36-46. Request from agent. "log in" procedure. col. 5, lines 40-52; col. 7, lines 26-30. Identify available agent.); and

pushing means for causing a web server to push an asynchronous message to the web browser in response to an incoming event, wherein the incoming event comprises a request to establish communication with a user (col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent.),

the web browser presents a user interface change in response to the asynchronous message (col. 5, lines 40-52. Initiate path with browser and permit interaction. col. 9, lines 53-55. Receive request.), and

the incoming event is received by a communication server (col. 5, lines 21-26. Proxy receives request. col. 5, lines 32-35. Rendezvous service also receives request);

identifying means for identifying a source of the asynchronous message, associating means for associating a wait request with the source, wherein the associating identifies web browser as a recipient of the asynchronous message (col. 5, lines 35-37, col. 8, lines 50-54, 63-67. Match particular customer to a particular agent. col. 9, lines 53-55. Send a support request to selected agent.);

the client computer comprises providing means for causing the web browser to provide the wait request to the web server wherein, the wait request is associated with the web browser, and the wait request enables the web server to push the asynchronous message to the web browser (col. 8, lines 36-46. Request from agent. "log in" procedure. col. 5, lines 40-52; col. 7, lines 26-30. Identify available agent.).

Pell does not specifically teach the web browser waits and is capable of concurrently performing other tasks. Pell does not specifically teach that the wait request specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process.

Eftis teaches of establishing a persistent connection between a web browser and a web server, wherein the web browser waits for an asynchronous message and is capable of concurrently performing other tasks (col. 4, lines 6-11, 33-43; col. 9, lines 19-31; col. 14, lines 58-67. Maintain connection in a non-blocking manner and receive messages.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the web browser to wait for the asynchronous message and be capable of

concurrently performing other tasks. The motivation for the suggested combination is that Eftis' teachings would improve Pell's teachings by facilitating multiple forms of communication with a user and enabling the web browser to receive update messages.

Fisher teaches of a request that specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process (col. 4, lines 43-48; col. 5, lines 18-22, 46-50; col. 14, lines 25-36; col. 15, lines 1-11, 21-27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the wait request to specify a target process of a plurality of processes, and for the processes to be configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process. The motivation for the suggested combination is that Fisher's teachings would improve the suggested system by enabling users to register for event notifications from specified sources while limiting the event notifications to authorized users.

As per claim 58, Pell teaches substantially the invention as claimed including a system for communicating comprising:

controlling module to control a user interface presented by a web browser comprising:

a pushing module to cause a web server to push an asynchronous message to the web browser in response to an incoming event, wherein the incoming event comprises a request to establish communication with a user (col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent.),

the web browser presents a user interface change in response to the asynchronous message (col. 5, lines 40-52. Initiate path with browser and permit interaction. col. 9, lines 53-55. Receive request.), and

the incoming event is received by a communication server (col. 5, lines 21-26. Proxy receives request. col. 5, lines 32-35. Rendezvous service also receives request.);

a request providing module to cause the web browser to provide a wait request to the web server wherein, the wait request is associated with the web browser, and the wait request enables the web server to push the asynchronous message to the web browser (col. 8, lines 36-46. Request from agent. "log in" procedure. col. 5, lines 40-52; col. 7, lines 26-30. Identify available agent.);

an identifying module to identify a source of the asynchronous message; and an associating module to associate the wait request with the source, wherein the associating identifies web browser as a recipient of the asynchronous message (col. 5, lines 35-37, col. 8, lines 50-54, 63-67. Match particular customer to a particular agent. col. 9, lines 53-55. Send a support request to selected agent.); and

a computer-readable storage medium configured to store the controlling module, the pushing module, the request providing module, the identifying module, identifying module, and the associating module (fig. 8; col. 4, lines 55-67; col. 5, lines 4-15. Physical server system comprising data for initiating communications.).

Pell does not specifically teach that the web browser is not blocked from receiving information from the web server while the web browser waits for the asynchronous message. Pell does not specifically teach that the wait request specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process.

Eftis teaches of establishing a persistent connection between a web browser and a web server, wherein the web browser is not blocked from receiving information from the web server while the web browser waits for the asynchronous message (col. 4, lines 6-11, 33-43; col. 9, lines 19-31; col. 14, lines 58-67. Maintain connection in a non-blocking manner and receive messages.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the web browser to not be blocked from receiving information from the web server while the web browser waits for the asynchronous message. The motivation for the suggested combination is that Eftis' teachings would improve Pell's teachings by facilitating multiple forms of communication with a user and enabling the web browser to receive update messages.

Fisher teaches of a request that specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process (col. 4, lines 43-48; col. 5, lines 18-22, 46-50; col. 14, lines 25-36; col. 15, lines 1-11, 21-27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the wait request to specify a target process of a plurality of processes, and for the processes to be configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process. The motivation for the suggested combination is that Fisher's teachings would improve the suggested system by enabling users to register for event notifications from specified sources while limiting the event notifications to authorized users.

As per claim 6, Pell, Eftis, and Fisher teach the method of claim 1. Pell teaches the method further comprising: generating instructions to generate the asynchronous message, the asynchronous message identifying the wait request, wherein the identifying identifies the web browser as a recipient of the message (col. 5, lines 35-37, col. 8, lines 50-54, 63-67. Match particular customer to a particular agent. col. 9, lines 53-55. Send a support request to selected agent.); and message providing instructions to provide the asynchronous message to the web server (col. 5, lines 46-50. Initiate via path to permit interaction).

As per claim 8, Pell, Eftis, and Fisher teach the method of claim 6. Pell teaches the method further comprising: storing a reference to a callback function with information from the wait request (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available.); and using the reference to call the callback function when the message is provided to the web server, wherein the callback function pushes the message (col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 9, Pell, Eftis, and Fisher teach the method of claim 8. Pell teaches the method further comprising: providing the callback function with context information, the context information identifying the web browser (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available. col. 4, lines 43-54. Interaction using browser. col. 6, lines 47-50. Establish link between browsers.).

As per claim 10, Pell, Eftis, and Fisher teach the method of claim 6. Pell teaches the method further comprising: assigning instructions to assign the wait request to a connection between the web server and a business process server; and listening instructions to listen to the connection for the message (col. 5, lines 46-50. Initiate via path to permit interaction. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 11, Pell, Eftis, and Fisher teach the method of claim 6. Pell teaches the method further comprising: assigning instructions to assign the wait request to a session between the web server and a business process server, the session being associated with a connection; and listening instructions to listen to the connection for the message (col. 5, lines 46-50. Initiate via path to permit interaction. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 12, Pell, Eftis, and Fisher teach the method of claim 1. Pell teaches the method further comprising: calling a callback function associated with the web browser when the message is received, wherein the callback function pushes the message (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available. col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 13, Pell, Eftis, and Fisher teach the method of claim 12. Pell teaches the method further comprising: storing a reference to the callback function and using the reference for calling the callback function (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available. col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 25, Pell, Eftis, and Fisher teach the computer program product of claim 23. Pell teaches the product further comprising: request providing instructions to cause the web browser to provide a wait request to the web server, the wait request being associated with the web browser (col. 8, lines 36-46. Request from agent. "log in" procedure. col. 5, lines 40-52; col. 7, lines 26-30. Identify available agent.); generating instructions to generate the asynchronous message, the asynchronous message identifying the wait request, wherein the identifying identifies the web browser as a recipient of the message; and message providing instructions to provide the asynchronous message to the web server (col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 26, Pell, Eftis, and Fisher teach the computer program product of claim 25. Pell teaches the product further comprising: storing instructions to store a reference to a callback function with



information from the wait request (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available.); and using instructions to use the reference to call the callback function when the message is provided to the web server, wherein the callback function pushes the message; wherein the computer-readable medium further stores the storing instructions and the using instructions (col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 27, Pell, Eftis, and Fisher teach the computer program product of claim 26. Pell teaches the product comprising: context providing instructions to provide the callback function with context information, the context information identifying the web browser; wherein the computer-readable medium further stores the context providing instructions (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available. col. 4, lines 43-54. Interaction/communication using browser. col. 6, lines 47-50. Establish link between browsers.).

As per claim 28, Pell, Eftis, and Fisher teach the computer program product of claim 25. Pell teaches the product comprising: assigning instructions to assign the wait request to a connection between the web server and a business process server; and listening instructions to listen to the connection for the message; wherein the computer-readable medium further stores the assigning instructions and the listening instructions (col. 5, lines 46-50. Initiate via path to permit interaction. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 29, Pell, Eftis, and Fisher teach the computer program product of claim 23. Pell teaches wherein the pushing instructions comprise: calling instructions to call a callback function associated with the web browser when the message is received, wherein the callback function pushes the message; and the computer-readable medium further stores the calling instructions (col. 5, lines 40-45.

Log in with request. col. 8, lines 43-49. Record agent as available. col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 30, Pell, Eftis, and Fisher teach the computer program product of claim 29. Pell teaches the product comprising: reference storing instructions to store a reference to the callback function and reference using instructions to use the reference for calling the callback function; wherein the computer-readable medium further stores the reference storing instructions and the reference using instructions (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available. col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 36, Pell, Eftis, and Fisher teach the computer system claim 34. Pell teaches wherein the instructions further comprise: request providing instructions to cause the web browser to provide a wait request to the web server, the wait request being associated with the web browser (col. 8, lines 36-46. Request from agent. "log in" procedure. col. 5, lines 40-52; col. 7, lines 26-30. Identify available agent.); generating instructions to generate the asynchronous message, the asynchronous message identifying the wait request, wherein the identifying identifies the web browser as a recipient of the message; and message providing instructions to provide the asynchronous message to the web server (col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 37, Pell, Eftis, and Fisher teach the computer system of claim 36. Pell teaches wherein the instructions further comprise: storing instructions to store a reference to a callback function with information from the wait request (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49.

Record agent as available.); and using instructions to use the reference to call the callback function when the message is provided to the web server, wherein the callback function pushes the message (col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 38, Pell, Eftis, and Fisher teach the computer system of claim 37. Pell teaches wherein the instructions further comprise: context providing instructions to provide the callback function with context information, the context information identifying the web browser (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available. col. 4, lines 43-54. Interaction/communication using browser. col. 6, lines 47-50. Establish link between browsers.).

As per claim 39 Pell, Eftis, and Fisher teach the computer system of claim 36. Pell teaches wherein the instructions further comprise: assigning instructions to assign the wait request to a connection between the web server and a business process server; and listening instructions to listen to the connection for the message (col. 5, lines 46-50. Initiate via path to permit interaction. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 40, Pell, Eftis, and Fisher teach the computer system of claim 34. Pell teaches wherein the pushing instructions further comprise: calling instructions to call a callback function associated with the web browser when the message is received, wherein the callback function pushes the message (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available. col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 41, Pell, Eftis, and Fisher teach the computer system of claim 40. Pell teaches wherein the instructions further comprise: reference storing instructions to store a reference to the callback function and reference using instructions to use the reference for calling the callback function (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available. col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 47, Pell, Eftis, and Fisher teach the system of claim 45. Pell teaches the server computer, further comprising: generating means for generating the asynchronous message, the asynchronous message identifying the wait request, wherein the identifying identifies the web browser as a recipient of the message (col. 5, lines 35-37, col. 8, lines 50-54, 63-67. Match particular customer to a particular agent.); and message providing means for providing the asynchronous message to the web server (col. 9, lines 53-55. Send a support request to selected agent col. 5, lines 46-50. Initiate via path to permit interaction).

As per claim 48, Pell, Eftis, and Fisher teach the system of claim 47. Pell teaches the server computer further comprising: storing means for storing a reference to a callback function with information from the wait request (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available.); and using means for using the reference to call the callback function when the message is provided to the web server, wherein the callback function pushes the message (col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent. col. 5, lines 46-50. Initiate via path to permit interaction.).

As per claim 49, Pell, Eftis, and Fisher teach the system of claim 48. Pell teaches the client computer further comprising: context providing means for providing the callback function with context information, the context information identifying the web browser (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available.).

As per claim 50, Pell, Eftis, and Fisher teach the system of claim 47. Pell teaches the server computer comprising: assigning means for assigning the wait request to a connection between the web server and a business process server; and listening means for listening to the connection for the message (col. 5, lines 46-50. Initiate via path to permit interaction. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 51, Pell, Eftis, and Fisher teach the system of claim 45. Pell teaches wherein the pushing means comprise: calling means for calling a callback function associated with the web browser when the message is received, wherein the callback function pushes the message (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available. col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 52, Pell, Eftis, and Fisher teach the system of claim 51. Pell teaches the server computer comprising: reference storing means for storing a reference to the callback function and reference using means for using the reference for calling the callback function (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available. col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent.);

As per claim 60, Pell, Eftis, and Fisher teach the system of claim 58. Pell teaches the system further comprising: a generating means to generate the asynchronous message, the asynchronous message identifying the wait request, wherein the identifying identifies the web browser as a recipient of the message (col. 5, lines 35-37, col. 8, lines 50-54, 63-67. Match particular customer to a particular agent.); and a message providing module to provide the asynchronous message to the web server, wherein the computer readable storage medium is configured to store the generating module and message providing module (col. 9, lines 53-55. Send a support request to selected agent col. 5, lines 46-50. Initiate via path to permit interaction).

As per claim 61, Pell, Eftis, and Fisher teach the system of claim 60. Pell teaches the system further comprising: a storing module to store a reference to a callback function with information from the wait request (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available.); and a using module to use the reference to call the callback function when the message is provided to the web server, wherein the callback function pushes the message, wherein the computer readable storage medium is configured to store the storing module and using module (col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent. col. 5, lines 46-50. Initiate via path to permit interaction.).

As per claim 62, Pell, Eftis, and Fisher teach the system of claim 61. Pell teaches the system further comprising: a context providing module to provide the callback function with context information, the context information identifying the web browser, wherein the computer readable storage medium is configured to store the context providing module (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available.).

As per claim 63, Pell, Eftis, and Fisher teach the system of claim 60. Pell teaches the system further comprising: an assigning module to assign the wait request to a connection between the web server and a business process server; and listening module to listen to the connection for the message, wherein the computer readable storage medium is configured to store the assigning module and listening module (col. 5, lines 46-50. Initiate via path to permit interaction. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 64, Pell, Eftis, and Fisher teach the system of claim 58. Pell teaches wherein the pushing means comprise: a calling module to call a callback function associated with the web browser when the message is received, wherein the callback function pushes the message, wherein the computer readable storage medium is configured to store the calling module (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available. col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent).

As per claim 65, Pell, Eftis, and Fisher teach the system of claim 64. Pell teaches the system further comprising: a reference storing module to store a reference to the callback function and a reference using module to use the reference for calling the callback function, wherein the computer readable storage medium is configured to store the reference storing module and the reference using module (col. 5, lines 40-45. Log in with request. col. 8, lines 43-49. Record agent as available. col. 7, lines 17-19. Receive request for support or services. col. 9, lines 53-55. Send a support request to selected agent.).

As per claim 68, Pell does not specifically teach the method of claim 1, wherein the persistent connection comprises a hypertext transfer protocol (HTTP) connection between the web browser and the web server when a user logs in.

Eftis teaches of a persistent connection comprising a hypertext transfer protocol (HTTP) connection between the web browser and the web server when a user logs in (col. 4, lines 6-11, 33-43; col. 9, lines 19-31; col. 14, lines 58-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the persistent connection to comprise a hypertext transfer protocol (HTTP) connection between the web browser and the web server when a user logs in. The motivation for the suggested combination is that Eftis' teachings would improve Pell's teachings by facilitating multiple forms of communication with a user and enabling the web browser to receive update messages.

Claims 7, 14-15, 31-32, 42-43, 53-54, 66-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pell, in view of Eftis, Fisher, and Gupta et al, US Patent #6,763,384 (Gupta hereinafter).

As per claim 7, Pell does not specifically teach the method of claim 6, wherein causing the web browser to provide the wait request comprises: downloading requesting instructions to the web browser, wherein downloading causes the web browser to execute the requesting instructions.

Gupta teaches an invention comprising of causing a browser to provide a wait request, wherein causing the web browser to provide the wait request comprises: downloading requesting instructions to the web browser, wherein downloading causes the web browser to execute the requesting instructions (col. 5, lines 60-col. 6, lines 9).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to download requesting instructions to the web browser, wherein downloading



causes the web browser to execute the requesting instructions. The motivation for the suggested combination is that Gupta's teachings would improve the suggested system by providing a client with necessary software to interact with a server. Furthermore, Gupta's teachings would also provide an improvement by efficiently utilizing resources on the network (col. 12, lines 20-24).

As per claim 14, Pell does not specifically teach the method of claim 13 comprising: storing a second reference to context information, the context information identifying the web browser and using the second reference for providing the context information to the callback function.

Gupta teaches an invention for providing notifications comprising of storing a second reference to context information, the context information identifying the web browser and using the second reference for providing the context information to the callback function (col. 5, lines 54-56. Identifier could be address and port with the protocol. col. 8, lines 34-40. Send events/messages received from application server using receiving identifier of client.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to store a second reference to context information, the context information identifying the web browser and use the second reference for providing the context information to the callback function. The motivation for the suggested combination is that Gupta's teachings would improve the suggested system by providing specific information to enable communication with a client. Furthermore, Gupta's teachings would also provide an improvement by efficiently utilizing resources on the network (col. 12, lines 20-24).

As per claim 15, Pell does not specifically teach the method of claim 1 wherein the change in the user interface comprises at least one of a group consisting of the following: causing a first user interface object to move to visually capture a user's attention; causing a second user interface object to issue a

sound to capture the user's attention; presenting a screen pop of data; and bringing a web browser window to the front of a screen

Gupta teaches of receiving a message that causes a change in a user interface comprising causing a first user interface object to move to visually capture a user's attention (col. 6, lines 59-61. On-line client displays the messages to the end user.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to cause a first user interface object to move to visually capture a user's attention. The motivation for the suggested combination is that Gupta's teachings would improve the suggested system by enabling an agent to be aware of incoming support requests.

As per claim 31, Pell does not specifically teach the computer program product of claim 30 comprising: context storing instruction to store a second reference to context information, the context information identifying the web browser and context using instructions to use the second reference for providing the context information to the callback function, wherein the computer-readable medium further stores the context storing instructions and the context using instructions.

Gupta teaches an invention for providing notifications comprising of storing a second reference to context information, the context information identifying the web browser and context using instructions to use the second reference for providing the context information to the callback function (col. 5, lines 54-56. Identifier could be address and port with the protocol. col. 8, lines 34-40. Send events/messages received from application server using receiving identifier of client.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to store a second reference to context information, the context information identifying the web browser and context using instructions to use the second reference for providing the context information to the callback function. The motivation for the suggested combination is that

Gupta's teachings would improve the suggested system by providing specific information to enable communication with a client. Furthermore, Gupta's teachings would also provide an improvement by efficiently utilizing resources on the network (col. 12, lines 20-24).

As per claim 32, Pell does not specifically teach the computer program product further comprising: user interface changing instructions configured to perform at least one of a group consisting of the following: cause a first user interface object to move to visually capture a user's attention; cause a second user interface object to issue a sound to capture the user's attention; presenting a screen pop of data; and bring a web browser window to the front of a screen, wherein the computer-readable medium further stores the user interface changing instructions.

Gupta teaches of receiving a message that causes a change in a user interface comprising causing a first user interface object to move to visually capture a user's attention (col. 6, lines 59-61. On-line client displays the messages to the end user.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to cause a first user interface object to move to visually capture a user's attention. The motivation for the suggested combination is that Gupta's teachings would improve the suggested system by enabling an agent to be aware of incoming support requests.

As per claim 42, Pell does not specifically teach the computer system of claim 41, wherein the instructions further comprise: context storing instruction to store a second reference to context information, the context information identifying the web browser and context using instructions to use the second reference for providing the context information to the callback function.

Gupta teaches an invention for providing notifications comprising of storing a second reference to context information, the context information identifying the web browser and context using instructions

to use the second reference for providing the context information to the callback function (col. 5, lines 54-56. Identifier could be address and port with the protocol. col. 8, lines 34-40. Send events/messages received from application server using receiving identifier of client.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to store a second reference to context information, the context information identifying the web browser and context using instructions to use the second reference for providing the context information to the callback function. The motivation for the suggested combination is that Gupta's teachings would improve the suggested system by providing specific information to enable communication with a client. Furthermore, Gupta's teachings would also provide an improvement by efficiently utilizing resources on the network (col. 12, lines 20-24).

As per claim 43, Pell does not specifically teach the computer system of claim 34 wherein the instructions further comprise: user interface changing instructions configured perform at least one of a group consisting of the following: causing a first user interface object to move to visually capture a user's attention; causing a second user interface object to issue a sound to capture the user's attention; presenting a screen pop of data; and bringing a web browser window to the front of a screen

Gupta teaches of receiving a message that causes a change in a user interface comprising causing a first user interface object to move to visually capture a user's attention (col. 6, lines 59-61. On-line client displays the messages to the end user.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to cause a first user interface object to move to visually capture a user's attention. The motivation for the suggested combination is that Gupta's teachings would improve the suggested system by enabling an agent to be aware of incoming support requests.

As per claim 53, Pell does not specifically teach the system of claim 52, the server computer further comprising: context storing means for storing a second reference to context information, the context information identifying the web browser and context using means for using the second reference for providing the context information to the callback function.

Gupta teaches an invention for providing notifications comprising of storing a second reference to context information, the context information identifying the web browser and context using instructions to use the second reference for providing the context information to the callback function (col. 5, lines 54-56. Identifier could be address and port with the protocol. col. 8, lines 34-40. Send events/messages received from application server using receiving identifier of client.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to store a second reference to context information, the context information identifying the web browser and context using instructions to use the second reference for providing the context information to the callback function. The motivation for the suggested combination is that Gupta's teachings would improve the suggested system by providing specific information to enable communication with a client. Furthermore, Gupta's teachings would also provide an improvement by efficiently utilizing resources on the network (col. 12, lines 20-24).

As per claim 54, Pell does not specifically teach the system of claim 45, the client computer further comprising: the user interface changing means configured to perform at least one of a group consisting of the following: causing a first user interface object to move to visually capture a user's attention; causing a second user interface object to issue a sound to capture the user's attention; presenting a screen pop of data; and bringing a web browser window to the front of a screen.

Gupta teaches of receiving a message that causes a change in a user interface comprising causing a first user interface object to move to visually capture a user's attention (col. 6, lines 59-61. On-line client displays the messages to the end user.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to cause a first user interface object to move to visually capture a user's attention. The motivation for the suggested combination is that Gupta's teachings would improve the suggested system by enabling an agent to be aware of incoming support requests.

As per claim 66, Pell does not specifically teaches the system of claim 65, further comprising: a context storing module to store a second reference to context information, the context information identifying the web browser and a context using module to use the second reference for providing the context information to the callback function, wherein the computer readable storage medium is configured to store the context storing module and the context using module.

Gupta teaches an invention for providing notifications comprising of storing a second reference to context information, the context information identifying the web browser and context using instructions to use the second reference for providing the context information to the callback function (col. 5, lines 54-56. Identifier could be address and port with the protocol. col. 8, lines 34-40. Send events/messages received from application server using receiving identifier of client.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to store a second reference to context information, the context information identifying the web browser and context using instructions to use the second reference for providing the context information to the callback function. The motivation for the suggested combination is that Gupta's teachings would improve the suggested system by providing specific information to enable

communication with a client. Furthermore, Gupta's teachings would also provide an improvement by efficiently utilizing resources on the network (col. 12, lines 20-24).

As per claim 67, Pell does not specifically teach the system of claim 58, further comprising: a user interface changing module configured to perform at least one of a group consisting of the following: causing a first user interface object to move to visually capture a user's attention; causing a second user interface object to issue a sound to capture the user's attention; presenting a screen pop of data; and bringing a web browser window to the front of a screen, wherein the computer readable storage medium is configured to store the user interface changing module.

Gupta teaches of receiving a message that causes a change in a user interface comprising causing a first user interface object to move to visually capture a user's attention (col. 6, lines 59-61. On-line client displays the messages to the end user.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to cause a first user interface object to move to visually capture a user's attention. The motivation for the suggested combination is that Gupta's teachings would improve the suggested system by enabling an agent to be aware of incoming support requests.

Claim 69 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pell in view of Eftis, Fisher, and Abbott et al. US Patent #7,089,497 (Abbott hereinafter).

As per claim 69, Pell teaches the method of claim 1 further comprising: storing the wait request in memory (col. 8, lines 35-49) and pushing the asynchronous message but not removing the wait request from memory in response to pushing the asynchronous message.

Abbott teaches of removing a request in response to sending a notification (col. 17, lines 27-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to remove the wait request from memory in response to pushing the asynchronous message. The motivation for the suggested combination is that Abbott's teachings would improve the suggested system by freeing memory as a result of removing completed requests and preventing duplicate processing of requests.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pell, in view of Eftis.

As per claim 16, Pell teaches substantially the invention as claimed including a method for communicating comprising:

causing a web server to push an asynchronous message to a web browser in response to an incoming event, wherein the incoming event comprises a request to establish communication with a user (col. 5, lines 9-10. Agent browser. col. 7, lines 17-19. Receive request for support or services. col. 6, lines 47-50. Establish link between browsers. col. 9, lines 53-55. Send a support request to selected agent.),

the web browser performs an action in response to the asynchronous message (col. 5, lines 40-52. Initiate path with browser and permit interaction.), and

the incoming event is received by a communication server (col. 5, lines 31-36. Collaboration server receives request.);

causing the web browser to provide a wait request to the web server wherein, the wait request is associated with the web browser, and the wait request enables the web server to push the asynchronous message to the web browser (col. 8, lines 36-46. Request from agent. "log in" procedure. col. 5, lines 40-52; col. 7, lines 26-30. Identify available agent and initiate link with agent.);



identifying a source of the asynchronous message; and associating the wait request with the source, wherein the associating identifies web browser as a recipient of the asynchronous message (col. 5, lines 35-37, col. 8, lines 50-54, 63-67. Match particular customer to a particular agent. ).

Pell does not specifically teach that the web browser is not blocked from receiving information from the web server while the web browser waits for the asynchronous message.

Eftis teaches of a web browser not blocked from receiving information from the web server while the web browser waits for the asynchronous message (col. 4, lines 6-11, 33-43; col. 9, lines 19-31; col. 14, lines 58-67. Maintain connection in a non-blocking manner and receive messages.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the web browser to not be blocked from receiving information from the web server while the web browser waits for the asynchronous message. The motivation for the suggested combination is that Eftis' teachings would improve Pell's teachings by facilitating multiple forms of communication with a user and enabling the web browser to receive update messages.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pell, in view of Eftis, Wick, US Patent #6,691,162 (Wick hereinafter), and Fisher.

As per claim 17, Pell does not specifically teach the method of claim 16, wherein the message includes an action instruction to cause the web browser to perform the action; and the wait request further specifies a target process of a plurality of processes, wherein the processes are configured to generate asynchronous messages.

Wick teaches of sending a message that includes an action instruction to cause an interface to perform the action (col. 3, lines 36-40; fig. 8).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the message to include an action instruction to cause a user interface to

perform the action. The motivation for the suggested combination is that Wick's teachings would improve the suggested system by increasing the likelihood that the agent is made aware of an incoming request for support.

Fisher teaches of a request that specifies a target process of a plurality of processes, and the processes are configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process (col. 4, lines 43-48; col. 5, lines 18-22, 46-50; col. 14, lines 25-36; col. 15, lines 1-11, 21-27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for the wait request to specify a target process of a plurality of processes, and for the processes to be configured to generate asynchronous messages, wherein the source of the asynchronous message is the target process. The motivation for the suggested combination is that Fisher's teachings would improve the suggested system by enabling users to register for event notifications from specified sources while limiting the event notifications to authorized users.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pell, in view of Eftis and Gupta.

As per claim 18, Pell does not specifically teach the method of claim 16 wherein the change in the user interface comprises at least one of a group consisting of the following: causing a first user interface object to move to visually capture a user's attention; causing a second user interface object to issue a sound to capture the user's attention; presenting a screen pop of data; and bringing a web browser window to the front of a screen

Gupta teaches of receiving a message that causes a change in a user interface comprising causing a first user interface object to move to visually capture a user's attention (col. 6, lines 59-61. On-line client displays the messages to the end user.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to cause a first user interface object to move to visually capture a user's attention. The motivation for the suggested combination is that Gupta's teachings would improve the suggested system by enabling an agent to be aware of incoming support requests.

### **Conclusion**

Examiner has cited particular sections of the reference(s) that are applied to the claims. While the sections are cited for convenience and are representative of the teachings of the prior art, other sections of the reference(s) may be relevant and applicable to the claims. It is respectfully requested that Applicant fully consider the reference(s) in its entirety when responding to the Office action.

A shortened statutory period for reply to this Office action is set to expire THREE MONTHS from the mailing date of this action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Joo whose telephone number is 571 272-3966. The examiner can normally be reached on Monday to Friday 8AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on 571 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair->

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/Joshua Joo/

Examiner, Art Unit 2454